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| 09/881,275 | 06/14/2001 | Masanori Takano | 444.31.01 | 6829 |

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EXAMINER

BELL, MELTIN

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| ART UNIT | PAPER NUMBER |
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2121

DATE MAILED: 11/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/881,275

Applicant(s)

TAKANO, MASANORI

Examiner

Meltin Bell

Art Unit

2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

This action is responsive to application **09/881,275** filed 6/14/01

Claims 1-9 have been examined.

Priority

Applicant is advised of possible benefits under 35 U.S.C. 119(a)-(d), wherein an application for patent filed in the United States may be entitled to the benefit of the filing date of a prior application filed in a foreign country.

Acknowledgment is made of applicant's claim for foreign priority based on an application 2000-181045 filed in Japan on **6/16/00**.

Information Disclosure Statement

Applicant is respectfully reminded of the ongoing Duty to disclose 37 C.F.R. 1.56 all pertinent information and material pertaining to the patentability of applicant's claimed invention, by submitting in a timely manner PTO-1449, Information Disclosure Statement (IDS) with the filing of applicant's application or thereafter.

Drawings

The United States Patent and Trademark Office of Draftperson's Patent Drawings Review have reviewed the formal drawings.

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The drawings have not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is required in correcting any errors of which applicant may become aware in the drawings.

The drawings are objected to because:

- Item 281b is labeled twice on FIG. 9 when page 19, line 10 suggests 281c is meant for the second labeling.
- FIG. 13 comes after FIG. 14.
- Page 20, line 4 indicates FIG. 11CD should be FIG. 11D and FIG. 11CE should be FIG. 11E.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is required in correcting any errors of which applicant may become aware in the specification.

The disclosure is objected to because of the following informalities:

- The 'software structure' of FIG. 1 mentioned on page 3, line 5 is not limited to software with FIG.1's references to input FROM CONTROLLER and output TO AUDIO-VISUAL OUTPUT APPARATUS. Page 8, lines 17-18 also suggest hardware components within FIG. 1.

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- Player character 350 referred to on page 14, line 15 is missing from the figures.
- Page 14, lines 22-24 suggests swapping Y and N branches in FIG. 7 for S107 and S102. The text describing FIG. 7 should also clarify whether S107 should branch to S102.
- (S106) on page 15, line 18 should follow 'are calculated' on page 15, line 16. S105 should also be added to page 15, line 18 where (S106) was. The same concerns apply to page 16, lines 6-9.
- Labeling enemy character A's t, identification of coordinates (x, y), destination direction (Θ) and presence position on each FIG. between 12 and 13, especially 13A-C, would help understanding pages 24-31. Placing crowd object values on the figures would also be helpful.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by *Baer et al* U.S. Patent Number 4,357,014 (November 2, 1982).

Regarding claim 1:

Baer et al teaches,

- obtaining the number of individuals which form a crowd at time t and the position of each individual, and assigning a position to each individual in the crowd at the next time $t + 1$ in accordance with a predetermined arrangement rule (column 1, lines 47-64, "Each of the individual... programmable player symbols")
- determining a destination direction with regard to a reference point of the crowd, determined by the positions of the individuals which form the crowd at time t (column 1, lines 33-47, "It is another... series of preprogrammed moves")
- determining the position at the next time $t + 1$ according to the position assigned by said arrangement process and said destination direction (column 2, lines 1-5, "When both participants... the television screen")

Regarding claim 2:

Baer et al teaches,

- an arranging process for obtaining the number of individuals which form a crowd at time t and the position of each individual, and assigning a position to each individual in the crowd at the next time $t + 1$ in accordance with a predetermined arrangement rule (column 1, lines 47-64, "Each of the individual... programmable player symbols")
- a process for determining a destination direction with regard to a reference point of the crowd, determined by the positions of the individuals which form the crowd at time t (column 1, lines 33-47, "It is another... series of preprogrammed moves")

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- a process for determining the position at the next time $t + 1$ according to the position assigned by said arrangement process and said destination direction (column 2, lines 1-5, "When both participants...the television screen")

Regarding claim 3:

Baer et al teaches,

- arranging means for obtaining the number of individuals which form a crowd at time t and the position of each individual, and assigning a position to each individual in the crowd at the next time $t + 1$ in accordance with a predetermined arrangement rule (column 1, lines 47-64, "Each of the individual...programmable player symbols")

- means for determining a destination direction with regard to a reference point of the crowd, determined by the positions of the individuals which form the crowd at time t (column 1, lines 33-47, "It is another... series of preprogrammed moves")

- means for determining the position at the next time $t + 1$ according to the position assigned by said arrangement process and said destination direction (column 2, lines 1-5, "When both participants...the television screen")

Regarding claim 4:

Baer et al teaches,

- a mode determination process for determining whether each character should operate as an individual or as a crowd (column 5, lines 21-25, "The joystick can...a desired distance")

- a virtual object creation process for specifying a group of characters which form the crowd and creating a virtual object which gives movement information about movement

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to the group of characters when it is determined that each character should operate as part of a crowd (FIG. 4; column 5, lines 25-30, "moving the joystick...of the display")

- a crowd movement process for causing the group of characters to move on the basis of said movement information (FIG. 6A-C; column 5, lines 30-34, "Two axis

joystick...will be possible")

Regarding claim 5:

Baer et al further teaches,

- information about a character assignment position in a virtual space and information about the destination direction of the virtual object (FIG. 4; column 3, lines 16-19, "Another item to...video football games")

Regarding claim 6:

Baer et al further teaches,

- an operator character display process for displaying, on a display screen of the display apparatus (column 4, lines 37-42, "microprocessor 14 outputs...the preprogrammed paths")

- a moving image of an operator character which moves in a virtual space in accordance with the operation of an operator, which is received via an operation apparatus, wherein the destination direction of said virtual object is a direction in which said operator character in the virtual space is chased (column 2, lines 22-33, "Another feature of...a completed pass")

Regarding claim 7:

Baer et al further teaches,

- a character movement process for causing a character to move in the virtual space when it is determined in said mode determination process that the character should move as an individual (column 6, lines 4-6, "the participant, by... vector on that key")
- a character search process for determining whether or not another character is present within an area of a predetermined range corresponding to the position of the character in the virtual space (column 6, lines 7-9, "The ball, as... received by player 94")
- a crowd forming process for causing the character to act so as to form a crowd together with said other character when it is determined that the other character is present (column 6, lines 9-12, "In the event...will be intercepted")

Regarding claim 9:

Baer et al further teaches,

- A recording medium, readable by said information processing apparatus, having recorded therein said program according to any one of claims 2, 4, 5, 6, 7, and 8 (column 1, lines 10-15, "Game playing devices...in the art")

Allowable Subject Matter

Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base

claim and any intervening claims as well as overcoming rejection(s) under 35 U.S.C. 112, first and second paragraphs, set forth in this Office action.

As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with.

See 37 CFR 1.111(b) and MPEP § 707.07(a).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- *Baer et al*; U.S. Patent Number 4,357,014
- *Bromley et al*; U.S. Patent Number 4,391,444
- *Okor*; U.S. Patent Number 4,126,851
- *S.K. Singhal, D.R. Cheriton*; "Using Projection Aggregations to Support Scalability in Distributed Simulation"; 1996 Proceedings of the 16th International Conference on Distributed Computing Systems; 27-30 May 1996; pp 196-206
- *Z. Szalavari, E. Eckstein, M. Gervautz*; "Collaborative Gaming in Augmented Reality"; Proceedings of the ACM symposium on Virtual Reality Software and Technology 1998; November 1998

Any inquiry concerning this communication or earlier communications from the Office should be directed to Meltin Bell whose telephone number is 703-305-0362.

This Examiner can normally be reached on Mon - Fri 7:30 am - 4:30 pm.

If attempts to reach this Examiner by telephone are unsuccessful, his supervisor, Anil Khatri, can be reached on 703-305-0282. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

MB

A handwritten signature in black ink, appearing to read 'Anil Khatri', with a long, sweeping horizontal line extending to the right.

ANIL KHATRI
SUPERVISORY PATENT EXAMINER